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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/404,903	09/24/1999	DONALD F. AULT	PO9-99-046	8888

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EXAMINER

NGUYEN, VAN H

ART UNIT PAPER NUMBER

2126

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/404,903

Applicant(s)

AULT ET AL.

Examiner

VAN H NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 11-23, 27-33 and 37-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 24-26 and 34-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to the appeal brief filed June 29, 2004. Claims 11-23, 27-33, and 37-43 are withdrawn from consideration. Claims 1-10, 24-26, and 34-36 are presented for examination.
2. Please cancel non-elected claims 11-23, 27-33, and 37-43 in the next response.

Response to Arguments

3. In view of the appeal brief filed on June 29, 2004, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.
4. To avoid abandonment of the application, appellant must exercise one of the following two options:
 - (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
 - (2) request reinstatement of the appeal.
5. If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-10, 24-26, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gulick et al.** (U.S.6,314,501).

8. **As to claim 1**, Gulick teaches the invention substantially as claimed including a method of performing a recoverable operation on a message queue in response to a request by a caller in an information handling system (see figs. 30 and 31A and the associated text), the method comprising the steps of:

- storing a use count (e.g., contains a count; col.3, lines 34-36 and fig.30) for the message queue (e.g., the input queue; col.3, lines 34-36 and fig. 30);
- storing a use count flag (e.g., overflow flag 3014; col.44, lines 34-35 and fig. 30) for the caller indicating whether the caller has acquired a lock (e.g., lock 3010; col.44, lines 30-32 and fig. 30) on the queue;

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- updating the use count (e.g., updating... a count field 3012; col.44, lines 30-33);
and

- atomically with updating the use count, updating the use count flag to indicate whether the caller has acquired a lock on the message queue (e.g., updating... an overflow flag 3014; col.44, lines 30-37).

While Gulick teaches the use of a count in the message queue, Gulick does not specifically teach “indicating a count of *tasks*.”

It would have been obvious to one of ordinary skill in the art to have applied the teachings of Gulick to include “indicating a count of *tasks*” because Gulick’s teachings would have provided an efficient mechanism for transferring messages using a message queue.

The fact that Gulick’s teachings “each input queue contains a count of the number of entries in the queue” (col.3, lines 34-35) and “a count field 3012 that specifies the current number of Signals in the queue” (col.44, lines 32-33) and the purpose of containing a count of the number of *entries* and specifying the current number of *Signals* in Gulick suggests “indicating a count of *tasks*.”

9. **As to claim 2**, Gulick teaches a locking operation (3114 and 3124; fig. 31 A), the step of updating the use count comprising the step of incrementing the use count (3126; fig. 31A), the step of updating the use count flag comprising the step of updating the use count flag to indicate that the caller has acquired a lock on the message queue (col.44, lines 30-37).

10. **As to claim 3**, Gulick teaches an unlocking operation (3116, 3131, and 3133; fig. 31 A), the step of updating the use count comprising the step of decrementing the use

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count (col.44, line 67-col.45, line 3), the step of updating the use count flag comprising the step of updating the use count flag to indicate that the caller has released a lock on the message queue (col.44, lines 30-37).

11. **As to claim 4**, Gulick teaches comparing the use count with a previously read use count atomically with the updating steps, the updating steps being performed only if the use count matches the previously read use count (col.36, line 63-col.37, line 6).

12. **As to claim 5**, Gulick teaches the use count is stored in a message queue table having an entry for the message queue (see fig. 30).

13. **As to claim 6**, Gulick teaches the message queue table also stores a pointer to the message queue (see fig. 29), the method comprising the further step of comparing the pointer with a previously read pointer atomically with the updating steps, the updating steps being performed only if the pointer matches the previously read pointer (col.44, lines 15-27).

14. **As to claim 7**, Gulick teaches the message queue table also stores an identifier of the message queue (3122; fig. 31A).

15. **As to claim 8**, Gulick teaches the use count flag is stored in a control block for the caller (col.44, lines 47-62).

16. **As to claim 9**, Gulick teaches the control block for the caller also contains an identifier of the message queue (col.50, lines 1-6).

17. **As to claim 10**, Gulick teaches the updating steps are performed by executing a single atomic instruction that updates the use count and, concurrently therewith, updates the use count flag (col.44, lines 29-37).

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18. **As to claim 24**, note the rejection of claim 1 above. Claim 24 is the same as claim 1, except claim 24 is an apparatus claim and claim 1 is a method claim.

19. **As to claim 25**, Gulick teaches means for comparing the use count with a previously read use count atomically with the updating operations, the updating operations being performed only if the use count matches the previously read use count (col.36, line 63-col.37, line 6).

20. **As to claim 26**, Gulick teaches the use count is stored in a message queue table having an entry for the message queue (see fig. 30), the message queue table also storing a pointer to the message queue (see fig.29), the method comprising the further step of: comparing the pointer with a previously read pointer atomically with the updating operations, the updating operations being performed only if the pointer matches the previously read pointer (col.44, lines 15-27).

21. **As to claim 34**, note the rejection of claim 1 above. Claim 34 is the same as claim 1, except claim 34 is a program storage device claim and claim 1 is a method claim.

22. **As to claims 35-36**, note the rejection of claims 25-26 above. Claims 35-36 are the same as claims 25-26, except claims 35-36 are program storage device claims and claims 25-26 are apparatus claims.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Alferness et al. (U.S. 6247064) teaches "Enqueue instruction in a system architecture for improved message passing and process synchronization"

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24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (703) 306-5971. **After mid-October, 2004, the examiner can be reached at (571) 272-3765.**

The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM.

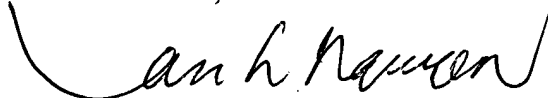
The examiner can also be reached on alternative Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 16, 2004

A handwritten signature in black ink, appearing to read 'Van H. Nguyen', is written over a large, sweeping horizontal line.

Van H. Nguyen